Amendments to the Specification

Please replace paragraph beginning on page 11, line 15 and ending on page 11, line 17 with the following rewritten paragraph:

Figure [[11]] 13 is a flow chart depicting the method of modulating a data signal at a transmitter onto an NTSC signal spectrum as performed by the system shown in FIGS. 3,4, and 7; and,

Please replace paragraph beginning page 11, line 19 and ending on page 11, line 20 with the following rewritten paragraph:

Figure [[12]] 14 is a flow chart depicting the method of demodulating a modulated data signal as performed by a receiver system shown in FIGS. 8-10.

Please add the following two paragraphs after the paragraph ending on page 11, line 13:

Figure 11 is an illustration of time and frequency domain effects of gating and windowing active line interval containing overlaid OFDM signal.

Figure 12 is a block diagram of the data detector and decoder.

Please replace paragraph beginning page 14, line 17 and ending on page 14, line 22 with the following rewritten paragraph:

Because the demodulating system will subject the QAM symbol streams to comb filtering, the precoding filter bank [[240]] 230 pre-emphasizes those portions of the symbol streams that will be distorted by the later comb filtering. Additionally the precoding filter bank 230 may shape the spectra of the narrowband channels to control inter-symbol interference. The pre-equalized filter bank 235 passes the precoded QAM symbol streams to the symbol stream combiner and frequency translator 240.

Please replace paragraph beginning page 15, line 7 and ending on page 15, line 18 with the following rewritten paragraph:

Figure 7 is a block diagram of the components of the signal conditioner [[140]] 130. The signal conditioner [[140]] 130 includes a digital to analog converter 250, a low pass filter 260 coupled to the converter 250, frequency translator 270 coupled to the low pass filter 260, and a variable

gain amplifier 280 coupled to the translator 270. The digital to analog converter 250 converts the samples of the single carrier centered OFDM symbol stream received from the symbol stream combiner and frequency translator 240. To cleans the converted symbol stream of its high frequency components, an analog low pass filter 260 filters the converted symbol stream. The frequency translator 270 translates the filtered symbol stream to the intermediate frequencies, approximately 2 to 3 MHz above the NTSC center frequency. The variable gain amplifier 280 controls the amplitude of the translated waveform to establish levels where interference observed in the sequence of images formed by a standard NTSC are acceptably small.

Please replace paragraph beginning page 17, line 1 and ending on page 17, line 6 with the following rewritten paragraph:

Figure [[12]] 11 shows how the window is applied in the time domain to the active segment of the horizontal line in the NTSC signal containing the OFDM data overlay. Also shown is the effect, observed in the frequency domain, of the window applied in the time domain. These effects are seen to be a widening of the spectral narrowband lines due to windowing the OFDM signal and a reduction of the luminance spectrum levels due to gating the horizontal blank pulses, and to windowing the NTSC signal components.

Please replace paragraph beginning page 17, line 8 and ending on page 17, line 20 with the following rewritten paragraph:

As shown in Figure 12, the demodulator of the OFDM narrow band signals, unit 330, from Figure 8 includes signal detectors 510, 520 coupled to a symbol decoder 530, a symbol mapper 540 coupled to the decoder 530, a channel decoder 550 coupled to the mapper 540, and a data buffer 560 coupled to the ~~mapper 540~~ channel decoder 550. The signal detectors 510, 520 detect the QAM symbol streams in the in-phase and quadrature signals respectively from the OFDM narrow band carriers for mapping the outputs into one of the possible transmitted signals per carrier. The symbol decoder 530 accepts the outputs of the detectors 510, 520 and decodes them by a symbol decoding process. This process entails a mapping of detected levels to a reduced set of levels using residue mapping as part of the pre-equalization correction performed at the modulator and the comb filtering applied at the demodulator. The symbol mapper 540 combines the in-phase and quadrature frames into a single bit stream which is then channel decoded by the channel decoder 550 (using FEC coding techniques) and sent to the data buffer 560 as a binary data stream.